ABSTRACT

A high purity Ru powder wherein the content of the respective alkali metal elements such as Na and K is 10 wtppm or less, and the content of Al is in the range of 1 to 50 wtppm. Further provided is a manufacturing method of such high purity Ru powder wherein Ru raw material having a purity of 3N (99.9%) or less is used as an anode and electrolytic refining is performed in a solution. Further still, provided is a high purity Ru powder for manufacturing a sputtering target which is capable of reducing harmful substances as much as possible, generates few particles during deposition, has a uniform film thickness distribution, has a purity of 4N (99.99%) or higher, and is suitable in forming a capacitor electrode material of a semiconductor memory; a sputtering target obtained by sintering such high purity Ru powder; a thin film obtained by sputtering this target; and a manufacturing method of the foregoing high purity Ru powder.